



Complete Summary

TITLE

Cardiac revascularization: age-standardized rate of CABG surgery performed on inpatients in acute care hospitals or PCI performed on patients in acute care hospitals, same day surgery facilities or catheterization laboratories, per 100,000 population age 20 years and over.

SOURCE(S)

Canadian Institute for Health Information (CIHI). Health indicators 2008: definitions, data sources and rationale. Ottawa (ON): Canadian Institute for Health Information (CIHI); 2008 May. 39 p.

Measure Domain

PRIMARY MEASURE DOMAIN

Use of Services

The validity of measures depends on how they are built. By examining the key building blocks of a measure, you can assess its validity for your purpose. For more information, visit the [Measure Validity](#) page.

SECONDARY MEASURE DOMAIN

Does not apply to this measure

Brief Abstract

DESCRIPTION

This measure is used to assess the age-standardized rate of coronary artery bypass graft (CABG) surgery performed on inpatients in acute care hospitals or percutaneous coronary interventions (PCI) performed on patients in acute care hospitals, same day surgery facilities or catheterization laboratories, per 100,000 population age 20 years and over.

RATIONALE

The choice of revascularization mode (i.e., percutaneous coronary intervention [PCI] or coronary artery bypass graft [CABG]) depends on numerous factors including physician preferences, availability of services, referral patterns, as well as differences in population health and socio-economic status. The combined

cardiac revascularization rate represents total activity of cardiac revascularization in a jurisdiction.

PRIMARY CLINICAL COMPONENT

Cardiac revascularization; coronary artery bypass graft (CABG); percutaneous coronary intervention (PCI)

DENOMINATOR DESCRIPTION

Total mid-year population age 20 years and over

NUMERATOR DESCRIPTION

Total number of discharges for coronary artery bypass graft (CABG) or percutaneous coronary intervention (PCI) for patients aged 20 years and over (see the related "Numerator Inclusions/Exclusions" field in the Complete Summary)

Evidence Supporting the Measure

EVIDENCE SUPPORTING THE VALUE OF MONITORING USE OF SERVICE

- A formal consensus procedure involving experts in relevant clinical, methodological, and organizational sciences
- One or more research studies published in a National Library of Medicine (NLM) indexed, peer-reviewed journal

Evidence Supporting Need for the Measure

NEED FOR THE MEASURE

Monitoring and planning
Variation in use of service

EVIDENCE SUPPORTING NEED FOR THE MEASURE

Canadian Institute for Health Information (CIHI). Health indicators 2008. Ottawa (ON): Canadian Institute for Health Information (CIHI); 2008. 96 p.

State of Use of the Measure

STATE OF USE

Current routine use

CURRENT USE

Federal health policymaking
Monitoring and planning
National reporting

Application of Measure in its Current Use

CARE SETTING

Ambulatory Care
Hospitals

PROFESSIONALS RESPONSIBLE FOR HEALTH CARE

Physicians

LOWEST LEVEL OF HEALTH CARE DELIVERY ADDRESSED

Regional

TARGET POPULATION AGE

Age greater than or equal to 20 years

TARGET POPULATION GENDER

Either male or female

STRATIFICATION BY VULNERABLE POPULATIONS

Unspecified

Characteristics of the Primary Clinical Component

INCIDENCE/PREVALENCE

In Canada, outside Quebec, in 2006-2007, the age-standardized rate of cardiac revascularization was 251 per 100,000 population age 20 years and over. Rates for larger health regions ranged from 166 to 393 per 100,000.

EVIDENCE FOR INCIDENCE/PREVALENCE

Canadian Institute for Health Information (CIHI). Health indicators 2008. Ottawa (ON): Canadian Institute for Health Information (CIHI); 2008. 96 p.

ASSOCIATION WITH VULNERABLE POPULATIONS

Unspecified

BURDEN OF ILLNESS

Unspecified

UTILIZATION

Unspecified

COSTS

Unspecified

Institute of Medicine National Healthcare Quality Report Categories

IOM CARE NEED

Not within an IOM Care Need

IOM DOMAIN

Not within an IOM Domain

Data Collection for the Measure

CASE FINDING

Both users and nonusers of care

DESCRIPTION OF CASE FINDING

Mid-year population age 20 years and over

DENOMINATOR SAMPLING FRAME

Geographically defined

DENOMINATOR INCLUSIONS/EXCLUSIONS

Inclusions

Total mid-year population age 20 years and over

Exclusions

Unspecified

RELATIONSHIP OF DENOMINATOR TO NUMERATOR

All cases in the denominator are not equally eligible to appear in the numerator

DENOMINATOR (INDEX) EVENT

Does not apply to this measure

DENOMINATOR TIME WINDOW

Time window is a single point in time

NUMERATOR INCLUSIONS/EXCLUSIONS

Inclusions

Total number of discharges for coronary artery bypass graft (CABG) or percutaneous coronary intervention (PCI) for patients aged 20 years and over

Note: Refer to the original measure documentation for the Canadian Classification of Diagnostic, Therapeutic, and Surgical Procedures (CCP) and Canadian Classification of Health Interventions (CCI) codes.

Note: Rates are based on the total number of discharges for a cardiac revascularization in a given year. Therefore, a patient who received more than one procedure (either CABG or PCI) during the same hospitalization would be counted once.

Exclusions

Procedures coded as cancelled, previous, out-of-hospital and "abandoned after onset" are excluded.

Note: PCI is generally provided in a day surgery facility or catheterization laboratory after which the patient will be admitted to acute care for an overnight or longer stay. In order to prevent double counting of PCI procedures reported by both day surgery and acute care facilities, PCI procedures coded as being performed out-of-hospital or reported by facilities without on-site PCI services were excluded.

MEASURE RESULTS UNDER CONTROL OF HEALTH CARE PROFESSIONALS, ORGANIZATIONS AND/OR POLICYMAKERS

The measure results are somewhat or substantially under the control of the health care professionals, organizations and/or policymakers to whom the measure applies.

NUMERATOR TIME WINDOW

Institutionalization

DATA SOURCE

Administrative data

LEVEL OF DETERMINATION OF QUALITY

Does not apply to this measure

PRE-EXISTING INSTRUMENT USED

Unspecified

Computation of the Measure

SCORING

Rate

INTERPRETATION OF SCORE

Undetermined

ALLOWANCE FOR PATIENT FACTORS

Case-mix adjustment

DESCRIPTION OF ALLOWANCE FOR PATIENT FACTORS

Age-standardized rates are reported.

STANDARD OF COMPARISON

External comparison at a point in time
External comparison of time trends
Internal time comparison
Prescriptive standard

PRESCRIPTIVE STANDARD

In 2004, the Cardiac Care Network of Ontario recommended a minimum provincial target rate for coronary artery bypass graft (CABG) of 120 interventions per 100,000 adults and 221 interventions per 100,000 adults for percutaneous coronary intervention (PCI) to be achieved by 2005–06, as well as a minimum provincial target rate for PCI of 260 procedures per 100,000 adults to be achieved by 2008/09. These recommendations are based on analyses of the historical trends in Ontario procedure rates, as well as incidence rates of the underlying conditions linked to CABG and PCI surgery.

EVIDENCE FOR PRESCRIPTIVE STANDARD

Canadian Institute for Health Information (CIHI). Health indicators 2008: definitions, data sources and rationale. Ottawa (ON): Canadian Institute for Health Information (CIHI); 2008 May. 39 p.

Evaluation of Measure Properties

EXTENT OF MEASURE TESTING

Unspecified

Identifying Information

ORIGINAL TITLE

Cardiac revascularization rate.

MEASURE COLLECTION

[Health Indicators 2008](#)

DEVELOPER

Canadian Institute for Health Information

FUNDING SOURCE(S)

Canadian Government

COMPOSITION OF THE GROUP THAT DEVELOPED THE MEASURE

Employees: Canadian Institute for Health Information (CIHI) Health Indicators

FINANCIAL DISCLOSURES/OTHER POTENTIAL CONFLICTS OF INTEREST

None

ADAPTATION

Measure was not adapted from another source.

RELEASE DATE

2008 May

MEASURE STATUS

This is the current release of the measure.

SOURCE(S)

Canadian Institute for Health Information (CIHI). Health indicators 2008: definitions, data sources and rationale. Ottawa (ON): Canadian Institute for Health Information (CIHI); 2008 May. 39 p.

MEASURE AVAILABILITY

The individual measure, "Cardiac Revascularization Rate," is published in "Health Indicators 2008: Definitions, Data Sources and Rationale." This document is

available in Portable Document Format (PDF) from the [Canadian Institute for Health Information \(CIHI\) Web site](http://www.cihi.ca/cihiweb/).

For more information, contact CIHI at, 4110 Yonge Street, Suite 300, Toronto, Ontario, Canada, M2P 2B7; Phone: 416-481-2002; Fax: 416-481-2950; E-mail: indicators@cihi.ca; Web site: <http://www.cihi.ca/cihiweb/>.

COMPANION DOCUMENTS

The following is available:

- Canadian Institute for Health Information (CIHI). Health indicators 2008. Ottawa (ON): Canadian Institute for Health Information (CIHI); 2008. 93 p. This document is available in Portable Document Format (PDF) from the [Canadian Institute for Health Information \(CIHI\) Web site](http://www.cihi.ca/cihiweb/).
- Canadian Institute for Health Information (CIHI). ICD-9/CCP, ICD-9-CM and ICD-10-CA/CCI codes for health indicators 2008. Ottawa (ON): Canadian Institute for Health Information (CIHI); 2008. various p. This document is available from the [CIHI Web site](http://www.cihi.ca/cihiweb/).

NQMC STATUS

This NQMC summary was completed by ECRI Institute on October 10, 2008. The information was verified by the measure developer on December 18, 2008.

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Date Modified: 4/13/2009

